Amendments to the Specification:

Page 1

Please substitute the following paragraph for the paragraph beginning at line 6:

This application claims priority of U. S. provisional Application S. N. 60/248,906, filed November 15, 2000, and assigned to the assignee of the present application, as does concurrently filed related application 09/973,776 (Docket Number FS-00510 ~~(02890037AA)~~) both of which are hereby fully incorporated by reference.

Page 9

Please substitute the following paragraph for the paragraph beginning at line 12:

Figure 2 is a schematic diagram of the lock circuit of Figure 1 as embodied on a VME circuit cards~~ears~~, as is preferred,

Page 10

Please substitute the following paragraph for the paragraph beginning at line 17:

As will become clear from the following discussion, the present invention provides a secure, fault-tolerant network than can implement an arbitrary security policy with arbitrarily fine granularity and continue to provide service in the presence of a variety of hardware failures and security penetration attacks. This is accomplished by developing a networking subsystem by inclusion of enhancements which accommodate existing elements of network architecture and software and integrate fault tolerant~~olerant~~ extensions of object oriented programming architecture, strong encryption strong

authentication at the node and data packet level and real-time active responses to detection of faults and attacks with enhanced sensitivity.

Page 18

Please substitute the following paragraph for the paragraph beginning at line 4:

More specifically, The PMC card 301 includes a dual ported RAM 309 to support simultaneous read and write operations from the PCI bus or the security encryption engine 307, and two network ports 303 and 305. The security/encryption engine 307 preferably has a B2 or better security rating and is configured to require authorization and authentication of the SPM board or network nodes with which it communicates. In this regard, it was noted above, that the SPM card assigns security association/identification information to data packets regardless of whether or not such an identification is made of a given user. Therefore, each operation or data packet through the node is authenticated as to originating with a known node of the network and the information so collected can be used for detection of "foreign" data packets and tracking of the origin of any attack to at least the boundary of any connected and similarly secured network.

Page 20

Please substitute the following paragraph for the paragraph beginning at line 8:

It should be noted that the network shown in Figure 4 (without link 430) provides redundant communication links between all nodes of the network even though there are no links between nodes of the same tier, as is also preferred for practice of the invention. (In this regard, however, it should be recognized that the assignment of any given tier to

any given node is arbitrary.) For example, node 440 can communicate with node 450 over communication links ~~427~~428, 423, 419 and 421; ~~427~~428, 415, 418 and 425; or ~~427~~428, 419, 417 and 425. Other redundant paths would exist if the network were extended to more tiers and/or more nodes per tier.

Page 24

Please substitute the following paragraph for the paragraph beginning at line 24:

The articulation of any communication path between any client and any server node in the network of Figure 4 that is achieved by the invention is shown in a generalized form 609 in Figure 6. It can be appreciated from Figure 4 that most communications or sessions between nodes will involve communications through a plurality of nodes since the direct connectivity of any given node is preferably limited for hardware economy. For purposes of this illustration, node 611 is the client node and node 617 is the server node and each has its own routers and SPM card 611', 617'. SPM cards 601, 603, 605 and 607 are at different respective nodes as are routers 613 and 615.

Page 25

Please substitute the following paragraph for the paragraph beginning at line 26:

In prior networks, a user, once identified and authenticated, has access to the entire network insofar as the authorization for that user extends and a session would extend from the client node to the server node. In accordance with the invention, however, that session is divided into a plurality of secure sessions of different, serially connected security domains, as illustrated in Figure 6. If any security domain (e.g.

security domain A 601, B 621 or C 623) involved in the connectivity thus established is then compromised in any detectable manner or a fault occurs, that compromise and/or fault is reported and logged, the node at which the fault or attack occurs is isolated and the routers controlled to establish other secure sessions over redundant communication links, as shown in Figure 7.

Page 27

Please substitute the following paragraph for the paragraph beginning at line 11:

Figure 8 illustrates application of the invention to a heterogeneous network 833 including both trusted and untrusted nodes. It should be appreciated that such a system could result during incremental retrofitting of the invention into an existing network system or as a final configuration of a network intended to include both trusted and untrusted nodes. In the former case, the invention would generally be employed at the locations were considered to be most critical for security although, as alluded to above, firewalls can be defeated with relative ease at the present state of the art. It will also be recognized that the deployment of the structure discussed above in connection with Figures 1 and 2 essentially forms a router interface device 835 at the edge of a secure network protected in accordance with the invention as a plurality of standard router network interface controllers (NIC) 837.